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## NEW SPECIES AND NEW RECORDS OF MITES OF THE GENUS *PEDICULASTER* (ACARI, HETEROSTIGMATA, PYGMEPHORIDAE) FROM UKRAINE

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**New Species and New Records of Mites of the Genus *Pediculaster* (Acari, Heterostigmata, Pygmephoridae) from Ukraine.** Khaustov A. A. — A new species *Pediculaster dudinskyi* Khaustov, sp. n. is described from Transcarpathian region of Ukraine. *Pediculaster hungaricus* Mahunka et Zaki, 1982 and *P. rugosus* Mahunka, 1973 are recorded from Ukraine for the first time.

**Key words:** Pygmephoridae, *Pediculaster*, new species, new records, Ukraine.

**Новый вид и новые находки клещей рода *Pediculaster* (Acari, Heterostigmata, Pygmephoridae) из Украины. Хаустов А. А.** — В статье приведено описание нового вида клещей *Pediculaster dudinskyi* Khaustov, sp. n. из Закарпатской области Украины. *Pediculaster hungaricus* Mahunka et Zaki, 1982 и *P. rugosus* Mahunka, 1973 впервые отмечаются в фауне Украины.

**Ключевые слова:** Pygmephoridae, *Pediculaster*, новый вид, новые находки, Украина.

### Introduction

The mite genus *Pediculaster* Vitzthum, 1927 is one of the largest in the family Pygmephoridae and includes about 100 species in the World fauna. Species of this genus inhabit dung and decaying organic materials. Phoretic females of mites of the genus *Pediculaster* usually phoretic on different Diptera (Martin, 1978). Recently Khaustov (2008 a) reviewed the genus *Pediculaster* of Ukraine. He recorded 19 species of *Pediculaster* in the Ukrainian fauna. During last two years a new species and two new records of mites of the genus *Pediculaster* were found in Ukraine.

The purpose of this paper is to describe a new species of the genus *Pediculaster* from Transcarpathian Region of Ukraine and provide new records of two species of this genus.

### Material and methods

Mites were extracted from soil and dung using Berlese funnels and mounted on slides in Berlese medium. Morphology studied in light microscope with phase contrast devise. Drawings made with aid of drawing tube. In the description, the terminology follows Lindquist (1986). System of Pygmephoidea follows Khaustov (2008 b). All measurements are given in micrometers (mkm) for holotype and paratype (in parenthesis). Type material deposited in the collection of Nikita Botanical Gardens, Yalta, Ukraine.

### *Pediculaster* Vitzthum, 1927

Type species: *Pygmephorus mesembrinae* G. Canestrini, 1881

#### *Pediculaster dudinskyi* Khaustov, sp. n. (fig. 1–5)

Type material. Holotype ♀, Transcarpathian reg., Uzhhorod, in the tree hole of poplar, 22.07.2009, (Zabludovskaya). Paratype: 1 ♀ with same data as holotype.

Phoretic female. Idiosomal length 340 (429), maximum width 165 (200). Idiosomal dorsum (fig. 1). Stigmata one-chambered. All tergites distinctly punctated.

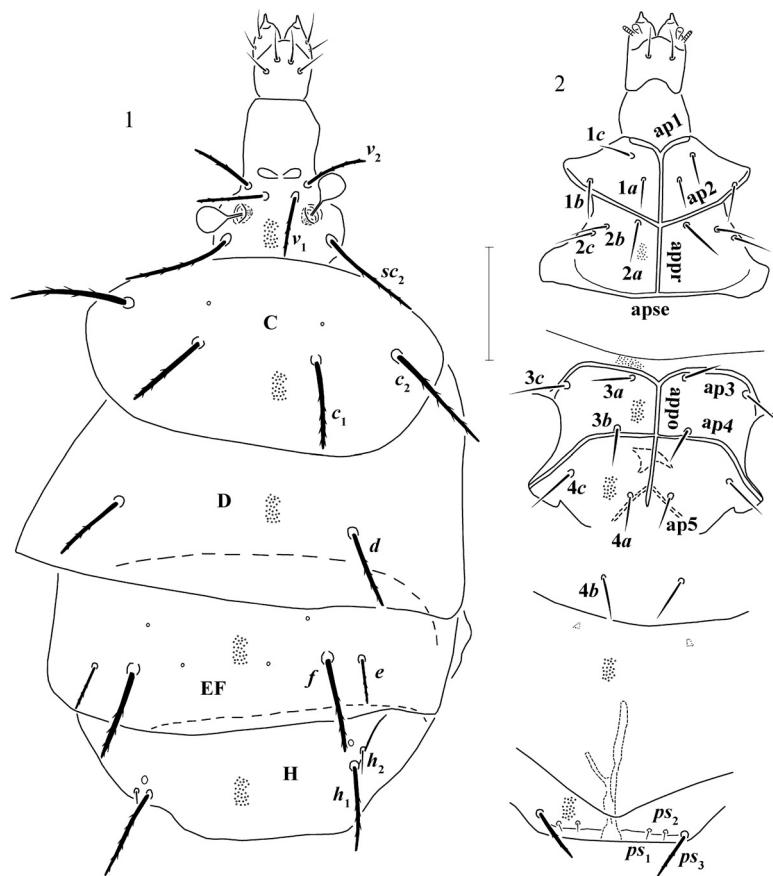


Fig. 1–2. *Pediculaster dudinskyi*, phoretic female: 1 — dorsum of the body; 2 — venter of the body. Scale bar 50  $\mu$ m.

Рис. 1–2. *Pediculaster dudinskyi*, форетоморфная самка: 1 — дорсальная сторона тела; 2 — вентральная сторона тела. Масштабная линейка 50 мкм.

All dorsal setae blunt-ended. Setae  $h_2$  thin, smooth. Other dorsal setae distinctly barbed. Length of dorsal setae:  $v_1$  33 (38),  $v_2$  32 (37),  $sc_2$  56 (58),  $c_1$  40 (47),  $c_2$  60 (7),  $d$  40 (49),  $e$  20 (23),  $f$  46 (56),  $h_1$  47 (57),  $h_2$  8 (9). Distances between dorsal setae:  $v_1-v_1$  12 (14),  $v_2-v_2$  30 (31),  $sc_2-sc_2$  48 (52),  $c_1-c_1$  52 (66),  $c_1-c_2$  36 (42),  $d-d$  103 (119),  $e-f$  15 (23),  $f-f$  87 (106),  $h_1-h_1$  89 (114),  $h_1-h_2$  6 (10). Idiosomal venter (fig. 2). Ventral plates punctate. Setae of anterior and posterior sternal plates smooth. Apodemes 5 present, diffuse at the end. Pseudanal setae blunt-ended. Setae  $ps_3$  barbed. Posterior margin of posterior sternal plate entire, concave. Length of ventral setae:  $1a$  17 (16),  $1b$  14 (22),  $1c$  15 (18),  $2a$  19 (23),  $2b$  18 (22),  $2c$  21 (22),  $3a$  18 (24),  $3b$  19 (22),  $3c$  25 (27),  $4a$  17 (22),  $4b$  22 (26),  $4c$  23 (24),  $ps_1$  4 (5),  $ps_2$  4 (5),  $ps_3$  22 (33).

Legs (fig. 3–5). Leg I (fig. 3). Setal formula:  $Tr1-Fe4-Ge4-TiTa17(4)$  Solenidia  $\omega_1$  11 >  $\omega_2$  7 (7–8) =  $\phi_1$  7 (7–8) =  $\phi_2$  7 (7–8). Solenidion  $\phi_1$  baculiform. Solenidia  $\omega_1$ ,  $\omega_2$  and  $\phi_2$  cylindrical. Setae  $v'TrI$ ,  $l'FeI$ ,  $l'GeI$ ,  $l''GeI$  blunt-ended. Leg II (fig. 4):  $Tr1-Fe3-Ge3-Ti4(1)-Ta6(1)$ . Setae  $v'TrII$ ,  $dFeII$ ,  $l'FeII$  blunt-ended. Solenidion  $\omega$  7 (7–9) finger-shaped. Solenidia on tibiae II–IV very small, difficult to see. Tarsi II–III with large claws. Leg III:  $Tr1-Fe2-Ge2-Ti4(1)-Ta6$ . Setae  $v'TrIII$ ,  $dFeIII$  blunt-ended. Leg IV (fig. 5):  $Tr1-Fe2-Ge1-Ti4(1)-Ta6$ . Claws simple. Setae  $v'TrIV$ ,  $v'FeIV$ ,  $dFeIV$ ,  $v'GeIV$ ,  $v''TiIV$  blunt-ended.



Fig. 3–5. *Pediculaster dudinskyi*, phoretic female: 3–4 — legs I and II, respectively. Scale bar 50  $\mu$ m. *Pediculaster dudinskyi*, phoretic female: 5 — leg IV. Scale bar 50  $\mu$ m.

Рис. 3–5. *Pediculaster dudinskyi*, phoretic female: 3–4 — ноги I и II соответственно. Масштабная линейка 50 мкм. *Pediculaster dudinskyi*, phoretic female: 5 — нога IV. Масштабная линейка 50 мкм.

#### Male and larva unknown.

**Etymology.** The new species was named in the honor of T. T. Dudinsky, Ukrainian acarologist, head of department of Zoology Uzhhorod National University, Uzhhorod, Ukraine for his inestimable help during authors expedition to Transcarpatian region.

**Differential diagnosis.** The new species is most similar to *Pediculaster zachvatkini* (Savulkina, 1978), but differs by the presence of apodemes 5 (absent in *P. zachvatkini*), by distinctly shorter solenidia  $\omega_1$  and  $\omega_2$ , and by lateral position of solenidion  $\phi_1$  closer to base of setae  $p''$  than to base of solenidion  $\phi_2$  (in *P. zachvatkini* solenidion  $\phi_1$  situated dorsolaterally, very close to base of solenidion  $\phi_2$ ).

#### *Pediculaster hungaricus* Mahunka et Zaki, 1982

**Material examined.** One phoretic female, Ukraine, Kyiv, Fomin botanical gardens, litter under *Ulmus* sp., 26.06.2008, (Zabludovskaya).

This species was described from Hungary (Mahunka, Zaki, 1982). New record for the Ukrainian fauna.

***Pediculaster rugosus* Mahunka, 1973**

Material examined. One phoretic female, Ukraine, Donetsk reg, "Khomutovskaya steppe" Nature Reserve, in the horse dung, 31.05.2009, Coll. A. A. Khaustov.

This species was described from Mongolia (Mahunka, 1973). New record for the Ukrainian fauna.

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